

USAID

OFFICE OF INSPECTOR GENERAL

Audit of the Data Quality for USAID/Panama's Strategic Objective for Canal Watershed Management

**Audit Report No. 1-525-01-004-P
May 7, 2001**



Regional Inspector General / San Salvador

U.S. Agency for International Development

USAID

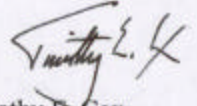


U.S. Agency for
INTERNATIONAL
DEVELOPMENT

RIG/San Salvador

May 7, 2001

MEMORANDUM

FOR: USAID/Panama Director, Lawrence Klassen 
FROM: Regional Inspector General/San Salvador, Timothy E. Cox
SUBJECT: Audit of the Data Quality for USAID/Panama's Strategic Objective
for Canal Watershed Management (Report No. 1-525-01-004-P)

This memorandum is our report on the subject audit. In finalizing the report, we considered your comments on our draft report. Your comments are included in their entirety in Appendix II.

The report contains three recommendations for your action. Based on your comments, a management decision has been reached for all three recommendations. A determination of final action for these recommendations will be made by the Bureau for Management's Office of Management Planning and Innovation (M/MPI/MIC).

I appreciate the cooperation and courtesy extended to my staff during the audit.

Table of Contents	Summary of Results	3
	Background	3
	Audit Objective	4
	Audit Findings	
	Did USAID/Panama assess data quality for the performance indicators for the strategic objective on the Panama Canal watershed management?	5
	Reported Baseline Data Were Not Assessed	6
	Indicator Definitions and Data Collection Methodologies Lacked Precision	7
	Management Comments and Our Evaluation	10
	Appendix I – Scope and Methodology	11
	Appendix II – Management Comments	13
	Appendix III – Summary of USAID/Panama’s Performance Monitoring Controls	16

Summary of Results

As part its fiscal year 2001 audit plan, the Regional Inspector General/San Salvador performed an audit of USAID/Panama's March 2000 Results Review and Resource Request (R4) to review the Mission's performance monitoring system and, specifically, to answer the audit objective:

- Did USAID/Panama assess data quality for the performance indicators for the strategic objective on the Panama Canal watershed management?

USAID/Panama did not always assess baseline data quality in accordance with Automated Directive System (ADS) 203.3.6.6 and other relevant guidance as demonstrated by indicators appearing in its March 2000 R4 for its Panama Canal Watershed Strategic Objective. The report contains a recommendation that USAID/Panama perform data quality assessments for the reported results for all performance indicators in its next R4 or fully disclose in the R4: (1) why indicators were not assessed, (2) the resulting limitations in the confidence in data quality, and (3) a time frame for assessing the performance indicator. (See pages 6 through 7.)

In addition, USAID/Panama did not have a finalized Performance Monitoring Plan. Its draft plan, issued subsequent to the submission of the March 2000 R4, did not provide sufficiently precise definitions of all indicator terms. The report recommends that USAID/Panama revise its draft Performance Monitoring Plan to precisely define performance indicators, including units of measurement, and to precisely describe performance indicator data collection methodologies. (See pages 7 through 9.)

The report also found that for one indicator, the definition, data collection method and reported results were flawed and confusing in several respects. The report recommends that USAID/Panama revise the performance indicator to have a precise indicator definition, unit of measurement, and data collection method allowing for clarity and measurable progress. (See pages 9 through 10.)

Background

On December 31, 1999, the United States Government reverted the Panama Canal, its operations, and associated lands and facilities to the Panamanian Government. The Panama Canal contributes substantially to Panama's economy and is important to world trade and to the economic growth of the Western Hemisphere. In order to properly assume its responsibilities for management of the canal, the Government of Panama created the Panama Canal Authority, whose mandate includes the protection, conservation, and maintenance of the water and natural resources of the canal's watershed.

In January 2000, USAID/Panama's Strategic Objective (SO) No. 1, "Panama sustainably manages the canal watershed and buffer areas," was approved by USAID/Washington. This SO was established to address critical issues related to establishing a sustainable Panamanian institutional capacity to protect and conserve the natural resources in the Panama Canal Watershed in order to assure availability of water resources upon which the effective operation of the Panama Canal depends. The SO covers fiscal years 2000 through 2006 with estimated funding of \$31.5 million. As of December 31, 2000, the SO had obligations totaling \$3.4 million.

In March 2000, USAID/Panama submitted its annual Results Review and Resource Request (R4)—the Mission's most significant performance report—highlighting calendar year 1999 program accomplishments and fiscal year 2002 strategic directions. The R4 report included an attachment which included the two overall and eight intermediate results indicators for the newly-approved SO. Baseline data was established for each of the indicators, using 1999 as the baseline year.¹

Automated Directives System 203, "Assessing and Learning," defines USAID's practice and standards for assessing and learning from program performance at the SO team and mission levels. Section 203.3.6.6, "Assessing the Quality of Performance Data," includes guidance on the assessment of data quality. It requires that "data quality must be reassessed as needed" and states that operating units must (1) verify and validate performance information to ensure that data are of reasonable quality; (2) review data collection, maintenance, and processing procedures to ensure that they are consistently applied and continue to be adequate; and (3) retain documentation of the assessment in the SO team's performance management files. The purpose of data quality assessments is to ensure that performance information is sufficiently complete, accurate, and consistent and meets the ADS indicator quality requirements. ADS 203.3.6.5 states the two dimensions of indicator quality—(1) characteristics of the indicators and (2) quality of the data reported for a given indicator. The characteristics of effective indicators are: (1) directness, (2) objectivity, (3) practicality, and (4) adequacy. ADS provides that once an SO team is satisfied that an indicator meets these characteristics, it must consider the quality of the actual measured value collected for each indicator. Data quality standards for measured values mentioned by the ADS are: (1) validity, (2) reliability, (3) timeliness, (4) precision, and (5) integrity.

Audit Objective

As part of its fiscal year 2001 audit plan, the Regional Inspector General/San Salvador performed an audit of USAID/Panama's March 2000 R4 to review the Mission's performance monitoring system and, specifically, to answer the following audit objective:

¹ However, one indicator, No. 2.1, *Management of new and existing protected areas strengthened*, identified 1998 as the baseline year.

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- Did USAID/Panama assess data quality for the performance indicators for the strategic objective on the Panama Canal watershed management?

Appendix I describes the audit's scope and methodology.

Audit Findings

Did USAID/Panama assess data quality for the performance indicators for the strategic objective on the Panama Canal watershed management?

USAID/Panama did not always assess data quality in accordance with Automated Directives System (ADS) 203.3.6.6 and other relevant guidance as demonstrated by indicators appearing in its March 2000 Results Review and Resource Request (R4).

The Mission's R4 report included baseline data for 10 performance indicators for the Panama Canal Watershed Strategic Objective. After discussing the indicators with the Mission's staff, we focused our testing on the nine performance indicators reflecting ongoing activities. At the time the March 2000 R4 report was submitted, the Mission had not prepared a Performance Monitoring Plan. The Performance Monitoring Plan should include indicator descriptions and units of measurements, data sources, data collection schedules, data calculation methodologies, and data acquisition and analysis responsibilities within the Mission. Consequently, the Mission did not meet the ADS requirements for assessing the quality of its indicators—the first step in assessing data quality.

Also, as a result of not having a Performance Monitoring Plan, the Mission did not always perform assessments of the baseline data reported in the March 2000 R4. The Mission performed data assessments for only two of the six² indicators for which assessments were necessary for the March 2000 R4. Of the four indicators for which a data assessment was lacking, all had inaccurate or unsupported baseline data reported in the R4.

Data for the two indicators which the Mission did assess was based on a survey conducted by an independent research firm, and the Mission performed a sufficient assessment of the data source and the reported results. For these two indicators and the three for which an assessment of baseline amounts was not required, all had accurate baseline data reported in the R4.

² Baseline data for three of the nine indicators were too simple to require a data quality assessment. For example, the indicator *Actions taken by the Inter-Institutional Commission for the Canal Watershed (CICH) on strategies, policies, programs and projects that could affect the Panama Canal Watershed* had a reported baseline result of zero for 1999. The members of the CICH were not appointed until March of 2000.

In December 2000—nine months after the submission of its March 2000 R4—the Mission issued its first draft Performance Monitoring Plan. However, for eight of the nine indicators we reviewed, indicator definitions and/or data collection methodologies in the draft plan were not sufficiently precise for producing consistent and reliable information.

We identified two aspects of the Mission's performance monitoring system, discussed below, that should be improved: (1) assessing data quality for reported results and (2) revising its draft Performance Monitoring Plan to precisely define indicators and data collection methodologies. Appendix III summarizes the audit results for each of the nine indicators selected for review.

Reported Baseline Data Were Not Assessed

ADS 203.3.6.6 requires that "Operating Units assess data quality when establishing the performance indicators and when choosing data collection sources and methods." Assessments must ensure that performance information is sufficiently complete, accurate, and consistent. The USAID Center for Development Information and Evaluation issued TIPS Number 12, *Guidelines for Indicator and Data Quality*, to provide guidance for assessing data quality. It states, "As Performance Monitoring Plans are constructed, teams should 1) assess the types and sources of error for each indicator, 2) estimate the approximate levels of error that are likely, 3) assess how this error compares with the magnitude of expected change, and 4) decide whether alternative data sources (or indicators) need to be explored." Assessments should be systematic, documented, and cover all performance indicators.

Federal laws and regulations require Federal agencies to develop and implement internal management control systems that: (1) compare actual program results against those anticipated; (2) provide for complete, reliable, and consistent information; and (3) ensure that performance information is clearly documented and that the documentation is readily available for examination. TIPS Number 12 notes that data reliability requires a consistent data collection process. Otherwise, errors can occur which compromise the accuracy of reported results.

Due to staff not being familiar with the ADS requirements, the Mission had not assessed baseline data quality for four of the six performance indicators for which assessments were necessary. The Mission cited a lack of detailed guidance on the performance monitoring process. The March 2000 R4 was prepared prior to the issuance of the revised ADS 200 series on managing for results. Mission officials stated that previous guidance lacked sufficient detail to guide missions in performing data quality assessments.

Due to the lack of baseline data assessments, reported results were inaccurate or not supported for four of the nine reported results. Examples of these cases are as follows:

- Two related performance indicators were *Environmental NGOs reach sustainability* and *NGOs make an impact on the Panama Canal Watershed and buffers*. The unit of measure for both indicators was the number of selected criteria for sustainability and impact met by Non-Governmental Organizations (NGOs) related to the indicator. Although the R4 lists the source of the 1999 baseline results as contractor survey, NGO inventory, USAID contractor written information, and USAID reports, the amounts reflected in the R4 were provisional estimates used in the development of the Mission's strategic plan and should not have been used in the R4.
- Another indicator was *residents in the Panama Canal Watershed and buffer areas served according to integrated solid waste management plans*. The 1999 reported baseline result was 15,000 residents. Supporting documentation showed 14,362—a difference of 4 percent.

TIPS No. 12 states that sound decisions by USAID management require accurate, current, and reliable information. Without reliable performance data, decision makers have little assurance that an operating unit exceeded or fell short in achieving its program objectives and related targets. The inaccurate and unsupported information cited in our report impairs USAID/Panama's ability to (1) measure progress in achieving program objectives and (2) use performance information in budget allocation decisions. In regard to ensuring that performance data in its R4 are accurate, supported, and complete, the Mission should review, for the R4 prepared in 2001, all indicator results for accuracy, support, and completeness prior to issuance.

Recommendation No. 1: We recommend that USAID/Panama perform data quality assessments for the reported results of all performance indicators in its next Results Review and Resource Request or fully disclose in the Results Review and Resource Request: (1) why data were not assessed, (2) the resulting limitations in the confidence in data quality, and (3) a time frame for assessing performance data.

Indicator Definitions and Data Collection Methodologies Lacked Precision

ADS 201.3.4.13 states that Performance Monitoring Plans "must:

- provide a detailed description of the performance indicators to be tracked;
- specify the source, method, and schedule for data collection and assign responsibility for data collection to a specific office, team, or individual;

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- describe the known data limitations, discuss the significance of the limitations for judging the extent to which goals have been achieved, and describe completed or planned actions to address these limitations; and
 - describe the quality assessment procedures that will be used to verify and validate the measured values of actual performance.”

ADS 203.3.6.5.b guidance on data reliability states that “One of the most important tests of reliability is whether another researcher can go back to the same raw data set and come up with the same answer that was reported before.”

As mentioned previously, USAID/Panama did not have a Performance Monitoring Plan at the time of its March 2000 R4 submission. However, the Mission issued a draft plan in December 2000. This plan assigned responsibility for data collection and for most indicators described the data sources and data collection methods. However, the draft plan did not provide sufficiently precise definitions of all indicator terms that would allow another researcher to replicate the results and to be unambiguous about what is being measured and what data are being collected.

Based on ADS criteria, eight of the nine performance indicators we reviewed needed more precise definitions and/or data collection methodologies. Although, in some cases, the lack of precise definitions did not affect the reported baseline results in the March 2000 R4, more precise definitions are needed in order to provide for more accurate and reliable reported results in future years. Examples of indicators needing more precise definitions and data collection methodologies are as follows:

- The draft Performance Monitoring Plan has inconsistent information on the data collection schedule for the two indicators (a) *institutional arrangements for execution of the Regional Plan recognized by key Panama Canal Watershed stakeholders* and (b) *management practices for execution of the Regional Plan supported by key Panama Canal Watershed stakeholders*. Based on the draft plan it is not clear whether the data will be collected annually or every three years. In addition, the plan lacked precise definitions of the terms in the indicators. For instance, the Performance Monitoring Plan indicated that stakeholders must be aware of all three arrangements mentioned in the plan for the first indicator, whereas the reported result in the March 2000 R4 was the average recognition level of the three arrangements.
- For the indicator *actions taken by the Inter-Institutional Commission for the Canal Watershed (CICH) on strategies, policies, programs and projects that could affect the Panama Canal Watershed*, the draft Performance Monitoring Plan did not establish criteria for the types of actions that would be counted.

Mission officials attributed the lack of precise definitions to the fact that they were still in the process of refining the Performance Monitoring Plan, noting that the draft plan, the first to be developed by the Mission, was just recently completed.

Without precise indicator definitions and data collection methodologies in the Mission's Performance Monitoring Plan, USAID/Panama is without a critical tool for planning, managing, and documenting data collection. The errors cited in reporting baseline data can be attributable, in part, to a lack of a Performance Monitoring Plan. The Performance Monitoring Plan contributes to the effectiveness of the Mission's performance monitoring system by ensuring that comparable data will be collected on a regular and timely basis. Without precise indicator definitions and data collection methodologies, USAID/Panama does not have assurance that it was maintaining essential controls over the operation of a credible and useful performance-based management system. Without those controls, results reporting may be disrupted or compromised by staff turnover, data may not be comparable from one period to the next, and the Mission does not have a detailed roadmap to manage its performance monitoring process. Performance Monitoring Plans should bring together the details of the performance monitoring process that would otherwise only be found in various contractor, grantee, host government and Mission documents.

Recommendation No. 2: We recommend that USAID/Panama revise its draft Performance Monitoring Plan to precisely define performance indicators, including units of measurement, and to precisely describe performance indicator data collection methodologies.

For the indicator *management of new and existing protected areas strengthened*, the definition, data collection method and reported results were flawed and confusing in several respects. As a result, the indicator did not meet any of the ADS data quality standards. The reported baseline amount was not objective, valid, reliable, timely or precise and lacked data integrity.

The unit of measure for the above indicator was the park management index, which was composed of 35 different criteria measuring various aspects of effective park management. Each of the 35 criteria was scored on a scale of one to five for five parks in the Panama Canal Watershed. These criteria varied in level of subjectivity, but none of the 35 criteria was adequately defined to allow for an objective measure which could be applied consistently between parks and from year to year. In addition, the reported result in the March 2000 R4 was not timely as December 1998 results were reported instead of December 1999.

The reported result for this indicator, an average index score of 3.25 on a scale of one to five, was not consistent with the 3.42 score reported by a representative of the Mission's Panamanian government counterpart. Mission officials believed

that the 3.42 score was too high and, therefore, made a downward adjustment. No documentation was provided to support this adjustment. Further, Mission officials stated that the government counterpart's evaluation was not based on inputs from the park managers as it was intended to be, but rather on the assessment of one government official. The Panamanian government official did not use the park manager input because the managers were not considered adequately trained to complete the index scoring in a reliable manner. None of the above limitations were described in the March 2000 R4.

The purpose of the indicator according to the Performance Monitoring Plan was to measure "...minimum protection, long-term management, long-term financing, and public participation in order to determine the strengths and weaknesses in park management." However, as defined, the Mission's performance indicator did not effectively measure these areas. Consequently, USAID/Panama did not have reliable information to use to monitor progress towards desired results.

Recommendation No. 3: We recommend that USAID/Panama revise the performance indicator *Management of new and existing protected areas strengthened* to have a precise indicator definition, unit of measurement, and data collection method allowing for clarity and measurable progress.

**Management
Comments and
Our Evaluation**

In its comments on the draft audit report, USAID/Panama stated that the audit was a useful management tool which has helped to strengthen the Mission's Performance Monitoring Plan. The comments contained the Mission's plan of action for implementing all three recommendations contained in the report. Therefore, a management decision has been reached for all three recommendations.

**Scope and
Methodology**

Scope

The Regional Inspector General/San Salvador conducted an audit, in accordance with generally accepted government auditing standards, to determine if USAID/Panama assessed data quality for the performance indicators for the strategic objective (SO) on the Panama Canal watershed management, as reported in its March 2000 Results Review and Resource Request (R4). We tested USAID/Panama's management controls related to the quality of data reported in its R4. Of the R4's 10 performance indicators for the Panama Canal Watershed SO, we audited the nine related to ongoing activities. The SO covers fiscal years 2000 through 2006 with estimated funding of \$31.5 million. As of December 31, 2000, the SO had obligations totaling \$3.4 million. The audit was conducted at USAID/Panama from January 29, 2001 through February 14, 2001.

Our review did not assess several aspects of the Mission's performance monitoring for indicators including (1) the development and supporting documentation of out-year targets and (2) results reported in the narrative portion of the R4.

Methodology

In answering the audit objective, we ascertained whether the Mission:

- completed an assessment of data quality for the indicators and the baseline data reported in the R4;
- prepared a Performance Monitoring Plan that:
 - contained a detailed definition of indicators that set forth precisely all technical elements of the indicator statements;
 - identified all data sources;
 - described the data collection method in sufficient detail to enable consistent use in subsequent years;
 - specified frequency and schedule of data collection;
 - assigned responsibility for collecting data;
- reported data that was adequately supported by source documents; and
- disclosed known data limitations (if any) in the comments section of the R4 report.

In order to test these aspects of the Mission's performance monitoring system, we interviewed officials as well as reviewed and tested documentation at USAID/Panama. Such documentation included Mission staffing and organization; the Mission's March 2000 R4; supporting documentation for R4 reported results;

Appendix I

Mission strategic plan for fiscal years 2000 to 2006; Mission internal control assessment for fiscal year 2000; the Mission's draft Performance Monitoring Plan; USAID R4 guidance, including applicable Automated Directives System chapters and USAID Center for Development Information and Evaluation TIPS Numbers 6, 7, and 12; and Mission funding data.

In addition, we assessed five aspects in the Mission's draft Performance Monitoring Plan (definition including unit of measurement, data sources, data collection methodology, data collection schedule, and responsibilities). In cases where we found that data assessments were not performed, we verified the reported baseline amounts for the indicator to supporting documentation maintained by USAID/Panama and its implementing partners.

In assessing data accuracy, we employed a materiality threshold of three percent.

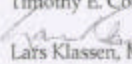
**Management
Comments**

**AGENCY FOR INTERNATIONAL DEVELOPMENT
PANAMA CITY, PANAMA**



UNITED STATES GOVERNMENT

MEMORANDUM

Date: 04/11/2001
To: Timothy E. Cox, Regional Inspector General/San Salvador
From:  Lars Klassen, Mission Director, USAID/Panama
Subject: Comments on Draft Audit of Data Quality for USAID/Panama's Strategic Objective for Canal Watershed Management

First, let me say that we appreciate the thorough and highly professional job the auditors performed during the data collection and analysis phase of this audit. They established good working relationships with mission staff, and information was freely and generously shared. The audit confirmed to us that the changes in our data gathering system that we were either already implementing or planning to implement are the correct ones to pursue.

We would like to take this opportunity to respond to the draft audit findings by: 1) providing the historical context in which the strategy, its indicators and the performance monitoring plan exist; and 2) informing you of the measures we either have taken or plan to take to address the audit findings.

Historical Context

USAID/Panama's Strategic Objective, Panama Sustainably Manages the Canal Watershed and Buffer Areas, was approved in January 2000. During the strategy review process, several changes were suggested for inclusion in the strategy's indicators. The mission agreed to make these changes and at the same time decided to make several additional adjustments to the indicators. In accordance with ADS 201.3.4.13, we planned to make these adjustments during the one-year adjustment period for finalization of the Performance Monitoring Plan (PMP) following the approval of a new strategy. Because the FY 2000-2002 R4 reported data gathered as of December 31, 1999, the new strategy and its indicators and

associated data obviously could not be included in that report. However, the mission decided to include the draft indicators of the new strategy as an appendix to the R4 in order to clearly indicate that the next year's R4 would not be reporting on the indicators from the previous, now extinct strategy. Thus the indicators that were included in the annex to the FY 2000-2002 R4, were draft indicators intended for finalization in the FY 2001-2003 R4.

Having said that, two of the draft indicators included information that was inaccurate. In Indicator 3.1, Environmental NGOs Reach Sustainability, the baseline figures were not actual figures but rather estimates that were included in the tables by error. In Indicator 4.1, Local Government and Private Sector Capacity for Environmental Management in PCW and Buffer Areas Increased, the baseline figure of 15,000 was taken from a secondary source. Now that the original source has been consulted, it has been determined that the actual figure was 14,362. This 5% difference represents an error greater than the allowable 4% margin of error.

The Performance Monitoring Plan was developed after the strategy approval in January 2000. It was developed using the same rationale as above, that the plan should be developed and finalized in conjunction with the finalization of the indicators to be included in the FY 2001-2003 R4.

Actions Being Taken to Address Audit Issues

The following actions either have been or will be taken over the next 12 months to address audit findings:

1. All indicators contained in the PMP have been reviewed, and where necessary, revised and included in the FY 2001-2003 R4. Indicator definitions have been refined and Performance Data Tables that previously had multiple indicators being reported on have been separated into single indicators. The draft audit report identified four indicators in the Summary of USAID/Panama's Performance Monitoring Controls table, Appendix III as lacking sufficient data quality assessments. Of the four indicators, the data quality of two (3.1 and 3.2) are currently being assessed by a local NGO (SONDEAR) which will provide final results by June 2001. Also, the data source for indicator 4.1 has been redefined such that the quality issue has been eliminated.
2. USAID/Panama will revise Indicator 2.1, Management of New and Existing Protected Areas Strengthened, to result in a reduced number of the current 35 criteria and to include only those criteria which can be objectively verified and measured. While we intend to keep the entire 35 criteria for internal management and regional comparison purposes, the reduced number of criteria which will be indexed and officially reported on in future R4s will reflect only those criteria which can be objectively verified and for which data quality assessments can be performed. To implement this effort, the Mission plans to

sign a Cooperative Agreement (CA) with The Nature Conservancy to provide technical assistance for one year to work with ANAM, Fundacion Natura and other counterparts to review and improve this index. This CA will also include extensive training for ANAM staff on assessing data quality, data collection and integration of the indicator index into their management systems.

3. The Performance Monitoring Plan will be finalized within 90 days of the submission of the R4. It will include all revised indicators with precisely defined units of measurement and descriptions of data collection methodologies. It will also indicate an annual data collection schedule for all indicators, including overall indicators 2A and 2B, Institutional Arrangements for Sustainable Watershed Management Recognized by Key Panama Canal Watershed Stakeholders. The PMP will also provide precise criteria for the types of actions to be measured in IR Indicator 1.1, Actions taken by the Inter-Institutional Commission for the Canal Watershed on strategies, policies, programs and projects that could affect the Panama Canal Watershed.

In closing, I want to repeat the point I made to the Audit Team, which is that I see audits such as this as serving as useful management tools. I believe that this exercise has served to strengthen our Performance Monitoring Plan. If you or your colleagues see additional actions we can take to further improve our PMP, or be more responsive to the subject audit report, please let me know.

SUMMARY OF USAID/PANAMA'S PERFORMANCE MONITORING CONTROLS
STRATEGIC OBJECTIVE NO. 1 "PANAMA SUSTAINABLY MANAGES THE CANAL WATERSHED AND BUFFER AREAS"

Indicator Number	Indicator Name	1. Baseline Established?	In the Draft Performance Monitoring Plan...					In the R4...		
			2. Indicator Precisely Defined?	3. Data Sources Identified?	4. Data Collection Method Described?	5. Data Collection Schedule Specified?	6. Responsibility Assigned?	7. Data Quality Assessment Done?	8. Data Agrees with Source?	9. Data Limitations Disclosed (if any)?
Overall Indicator 2A	Institutional arrangements for execution of the Regional Plan	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes
Overall Indicator 2B	Management practices for the execution of the Regional Plan	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes
IR-1 Indicator 1.1	Actions taken by the CICH	Yes	No	Yes	Yes	Yes	Yes	N/A	N/A	N/A
IR-1 Indicator 1.2	Environmental monitoring of the watershed contributes to management decisions	Yes	No	No	No	Yes	Yes	N/A	N/A	N/A
IR-2 Indicator 2.1	Park Management Index	Yes	No	No	No	Yes	Yes	No	No	No
IR-3 Indicator 3.1	Environmental NGOs reach sustainability	Yes	No	No	Yes	Yes	Yes	No	No	No
IR-3 Indicator 3.2	NGOs make an impact on the watershed and buffer areas	Yes	No	No	Yes	Yes	Yes	No	No	No
IR-4 Indicator 4.1	Residents served by solid waste management plans	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
IR-4 Indicator 4.2	Local governments have action plans	Yes	No	Yes	Yes	Yes	Yes	N/A	N/A	N/A
Total No (x out of 9)		0	8	4	2	2	0	4	4	4